6. THE CLAIMS

It is claimed:

1. A method of measuring the latency of a computer system comprising:

a) generating a request for certificate certification that includes a distinguished name, a public key and data that indicates a usage of the public key;

b) sending the request for certificate certification to the computer system;

c) determining the time that the request for certificate certification was sent;

d) receiving a certificate from the computer system;

e) determining the time that the certificate was received;

f) determining whether the certificate contains information that indicates whether the public key may be utilized for the usage indicated in the data; and

g) determining the difference between the time that the request for certificate certification was sent and the time that the certificate was received.

2. The method of claim 1, wherein the act of generating the request for certificate certification includes generating a request that includes an object identifier.

3. The method of claim 1, wherein the act of generating the request for certificate certification includes generating a request that includes a distinguished name and a public key that is owned by the entity that owns the distinguished name.

4. The method of claim 1, wherein the act of generating the request for certificate certification includes generating a request that includes a distinguished name and a public

key that is not owned by the entity that owns the distinguished name.

5. The method of claim 1, wherein the act of generating the request for a certificate certification includes digitally signing the distinguished name and the public key.

6. The method of claim 1, wherein the act of generating the request for a certificate certification includes sending a request that complies with the Public Key Cryptography Standard number 10.

7. The method of claim 1, wherein the act of generating the request for a certificate certification includes sending a request that complies with the Public Key Cryptography Standard number 7.

8. The method of claim 1, wherein the act of sending the request for certificate certification to the computer system includes sending a request for certificate certification to a certificate authority.

9. The method of claim 1, wherein the act of sending a request for a certificate includes sending a request that complies with the Public Key Cryptography Standard number 7.

10. The method of claim 1, wherein the act of determining the time that the request for certificate certification was sent includes accessing a third computer system that contains

a time reference.

11. The method of claim 1, wherein the act of determining the time that the request for certificate certification was sent includes determining the time that the last data packet of the complete certificate chain was received.

12. The method of claim 1, wherein the act of receiving the certificate includes receiving a certificate that is compliant with a version of the X.509 standard.

13. The method of claim 1, wherein the act of receiving the certificate includes receiving a certificate that is compliant with version 3 of the X.509 standard.

14. The method of claim 1, wherein the act of determining whether the certificate contains information includes determining whether an X.509 extension may be utilized for the usage indicated in the data.

15. The method of claim 1, wherein the act of determining whether the certificate contains information that indicates whether the public key may be utilized for the usage includes receiving a key-usage extension.

16. A method of measuring the latency of a computer system comprising:

a) generating a plurality of requests for certificate certification, each of the requests in the plurality of requests including a distinguished name, a public key and data that indicates a usage of the public key;

b) sending the plurality of requests for certificate certification to the computer system;

c) determining the time that each of the plurality of requests for certificate certification was sent;

d) receiving a plurality of certificates from the computer system, each of the plurality of certificates corresponding to one of the plurality of requests for certificate certification;

e) determining the time that each of the plurality of the certificates was received;

f) determining whether each of the plurality of the certificates contains information that indicates whether the public key included in the corresponding request for certificate certification may be utilized for the usage indicated in the data included in the corresponding request for certificate certification; and

g) for each of the plurality of requests for certificate certification, determining the difference between the time that the request for certificate certification was sent and the time that the corresponding certificate was received.

17. The method of claim 16, wherein the act of generating the plurality of requests for certificate certification includes generating a request that includes an object identifier.

18. The method of claim 16, wherein the act of generating the plurality of requests for certificate certification includes generating a request that includes a distinguished name and a public key that is owned by the entity that owns the distinguished name.

19. The method of claim 16, wherein the act of generating the plurality of requests for certificate certification includes generating a request that includes a distinguished name and a public key that is not owned by the entity that owns the distinguished name.

20. The method of claim 16, wherein the act of generating the plurality of requests for a certificate certification includes digitally signing the distinguished name and the public key for one of the plurality of requests.